Smart Classroom Knowledge of the Higher Secondary School Teachers in Vellore District

T Srimathi[1], Dr. C Jayanthi[2]

[1]Ph.D., Research Scholar (Ext)
[2]Ph.D., Associate Professor
Department of Education, Annamalai University, Annamalainagar - 608 002

Abstract: Technology is very important in today's world because it serves a variety of purpose in the most important aspects of society like communication, education, scientific progress, healthcare and business. Smart class contains each subject content materials with a real teacher in virtual classroom, teaching chapters in an interesting way which makes studies as exciting as watching movies along with distinctive features like quiz, multiple choice questions series and mind map for revision purposes. The smart classroom and e-learning is a one stop resource for learners to get diverse ideas related to their interest and subject enquiries. Web-based multimedia e-learning environments has added new dimension in designing course content as well as generating new dimensions in the teaching learning processes at school level. Smart classrooms are generally technologically and electronically enhanced classrooms in which teaching learning practices are manifested by the method of e-Learning. In smart classroom potential opportunities are created for active cognitive and social participation. Random sampling technique has been used in the selection of the sample of 600 higher secondary teachers working in the higher secondary schools situated in Vellore District of Tamilnadu, India. The tool namely Smart Classroom Knowledge Test (SCRKT) constructed and validated by investigator has been used and the findings of the investigation reveal that the majority of the higher secondary teacher shows average level of smart classroom knowledge. Moreover, no significant difference was observed in smart classroom knowledge in respect of their demographical variables.

Keywords: Smart Classroom, Higher Secondary School, School Teachers

INTRODUCTION:

Technology benefited us in every aspect of life from communication to education. In this age computers play a big role in our education. If a topic is understood by a visual method, it becomes more beneficial to understand to students. So the demand of using smart classes is being forcefully raised. "Smart Classes" provides education better through presentations and videos. A student can learn better through visualization. All the students may not understand the teaching methodology of a teacher, but can understand by smart classes. This can be seen in case of movies, i.e. students remember movies better than the lessons taught in classroom. This type of teaching creates an attention called as interest in them. So smart class technique is absolutely better. Such teaching helps to maintain the student's interest and focus by engaging them fully for the entire learning experience. Secondly, from the teacher's point of view, with the arrival of this digital initiative which is so practical to modern time and friendly to use, teachers can instantly evaluate/assess the learning achieved by their students in his/her class. If a concept taught is not understood then teacher can repeat with greater clarity and emphasis.

He/she can identify areas of student's strength as well as weaknesses. These ultimately help the student's for better understanding. Smart classrooms are very much beneficial in teaching-learning process in a school. Use of an appeal to audio-visual senses of students in using smart boards has been made. These smart boards are like a computer screen which is finely handled by a teacher and also by students to provide active participation. Some of the advantages for Smart board used inside a classroom. All the renowned institutions are setting a benchmark for using this concept. The concept of digitized classroom has not only made the education easy but it gave the students power to enhance their performance. This paper highlights the smart classroom knowledge of the higher secondary school teachers working in the schools situated in Vellore district.

LITERATURE REVIEW:

Vaiyapuri Raja P, Saveetha N conducted a study on Smart Classroom Knowledge of the higher secondary teachers. Random sampling technique has been used in the selection of the sample of 300 higher secondary teachers working in the higher secondary schools situated in Tiruvannamalai District of Tamilnadu, India. The Smart Classroom Knowledge Test (SCRKT) constructed and validated by Prabhu H, Vaiyapuri Raja P (2019) has been used and the findings of the investigation reveal that the majority of the higher secondary teacher shows average level of smart classroom knowledge. Moreover, the sex and the teachers' medium of instruction show a significant difference in smart classroom knowledge whereas their school locality and residential area do not show significant difference in smart classroom knowledge.

Anita Menon (2015) conducted a study on effectiveness of smart classroom teaching on the achievement in chemistry of secondary school students. The study investigated 320 Class IX students from Amritsar city. Achievement test in Chemistry of 50 items was used to collect the data. Experimental group was taught in smart classrooms and control group was taught by conventional mode of instruction. The results revealed that students achieved higher when taught in smart classes as compared to conventional mode of instruction. Learning styles of students did not affect their achievement in experimental and control group. No interaction effect of instructional strategies and learning style was found.

OBJECTIVES OF THE STUDY:
1. To study the level smart classroom knowledge of the higher secondary school teachers.
2. To study the significance of the difference in smart classroom knowledge between the male and female higher secondary school teachers.
3. To study the significance of the difference in smart classroom knowledge between the higher secondary school teachers working in the school located in the urban area and in the rural area.
4. To study the significance of the difference in smart classroom knowledge between the higher secondary school teachers residing in the urban area and in the rural area.
5. To study the significance of the difference in smart classroom knowledge between the higher secondary school teachers where medium of instruction was in the English medium and in the Tamil medium.
6. To study the significance of the difference in smart classroom knowledge between the higher secondary school teachers teaching the subjects belonging to arts group and science group.
7. To study the significance of the difference in smart classroom knowledge between the married and unmarried higher secondary school teachers.
8. To study the significance of the difference in smart classroom knowledge between the higher secondary school teachers from nuclear family and from the joint family.
9. To study the significance of the difference in smart classroom knowledge between the higher secondary school teachers having teaching experience up to 10 years and above 10 years.

HYPOTHESES OF THE STUDY:
1. The smart classroom knowledge of the higher secondary school teachers is high.
2. There is no significant difference in smart classroom knowledge between the male and female higher secondary school teachers.
3. There is no significant difference in smart classroom knowledge between the higher secondary school teachers working in the school located in the urban area and in the rural area.
4. There is no significant difference in smart classroom knowledge between the higher secondary school teachers residing in the urban area and in the rural area.
5. There is no significant difference in smart classroom knowledge between the higher secondary school teachers where medium of instruction was in the English medium and in the Tamil medium.
6. There is no significant difference in smart classroom knowledge between the higher secondary school teachers teaching the subjects belonging to arts group and science group.
7. There is no significant difference in smart classroom knowledge between the married and unmarried higher secondary school teachers.
8. There is no significant difference in smart classroom knowledge between the higher secondary school teachers from nuclear family and from the joint family.
9. There is no significant difference in smart classroom knowledge between the higher secondary school teachers having teaching experience up to 10 years and above 10 years.

METHODOLOGY:
The investigator used the normative survey method of study as it aims at identify the level of smart classroom knowledge which is possible only through the normative survey method.

SAMPLE:
600 higher secondary school teachers were selected as the sample for the present study using random sampling technique in the process of data collection.

RESEARCH INSTRUMENT:
Smart Classroom Knowledge Test (SCRKT) was constructed by the investigator the scale consists of 38 multiple choice items, for 38 marks and needs 30 minutes. The level of the Smart classroom knowledge has been given below one who score up to 30 have low level of smart classroom knowledge, one who score above 30 and up to 32 have an average level of smart classroom knowledge and one who score above 32 and up to 34 have high level of smart classroom knowledge. The smart classroom knowledge test has construct validity as the items were selected following rigid item analysis procedure described above. Its intrinsic validity was found to be 0.90. The reliability of the test by test – retest method is found to be 0.81. Thus the smart classroom knowledge test has validity and reliability.

STATISTICAL TECHNIQUES
➢   **Mean:** Mean of smart classroom knowledge of different groups was calculated.
➢   **Standard deviation:** S.D. of smart classroom knowledge of different groups was calculated.
➢   **'t' - test:** It has been used to calculate the significant difference of mean of different groups.

PROCEDURE

The data was collected by administering smart classroom knowledge test (SCRKT) on selected sample of higher secondary school teachers. The scoring procedure was done according to the manual of the scale. Data were treated statistically to find out the result and calculation. Mean, Standard deviation and t-test were used to find out the results. The results were as follows:

Table-1
The Mean and the Standard Deviation of the Smart Classroom Knowledge Scores of the Entire Sample and its Sub-Samples

Samples	Sub-Samples	N	Mean	Standard Deviation	'T' Value	Significant At 0.05 Level
Entire sample		600	31.68	3.63		-
Sex	Male teachers	272	31.56	3.87	0.69	Not Significant
	Female teachers	328	31.78	3.42		
School locality	Rural area	281	31.79	3.57	0.71	Not Significant
	Urban area	319	31.58	3.67		
Residence	Rural area	277	31.40	3.82	1.76	Not Significant
	Urban area	323	31.92	3.43		
Medium of instruction	Tamil medium	332	31.81	3.33	0.96	Not Significant
	English medium	268	31.52	3.97		
Subject group	Arts group	317	31.53	3.40	1.03	Not Significant
	Science group	283	31.84	3.87		
Marital status	Married teachers	341	31.62	3.94	0.45	Not Significant
	Unmarried teachers	259	31.76	3.17		
Family type	Nuclear family	291	31.43	3.65	1.60	Not Significant
	Joint family	309	31.91	3.60		
Teaching experience	Up to 10 years	287	31.56	3.69	0.80	Not Significant
	Above 10 years	313	31.79	3.57		

FINDINGS:

The Table-1 shows majority of the higher secondary school teachers have an average level of smart classroom knowledge. Moreover from the Table-1 the higher secondary school teachers shows there is no significant difference in respect of their sex, locality, residence, medium of instruction, subject group, marital status, family type and teaching experience.

CONCLUSION:

On the basis of analysis of data it may be concluded that entire sample value lie in the average level hence the investigator conclude the higher secondary school teachers shows an average level of smart classroom knowledge, based on the data analysis the higher secondary school teachers shows there is no significant difference in respect of their demographical variables. This will help the policy makers to design the curriculum in such a way that it will help the teacher to teach the subject in an effective manner and maintain pace with the modern education.

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